UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,576	10/31/2000	Albert Daniel Duree	1105a	1354

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TON, ANTHONY T

ART UNIT	PAPER NUMBER
2661	11

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Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.		Applicant(s)	
Office Action Summary		09/702,576		DUREE ET AL.	
		Examiner		Art Unit	
		Anthony T Ton		2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>31 October 2000</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-36</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-36</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>31 October 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>4 and 7</u>.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 1-04)   **Office Action Summary**   Part of Paper No./Mail Date 11

DETAILED ACTIONS

Abstract

1.   The abstract is objected to because of the following informalities:

Term "**JMS/81700-011/188404.1**" in line 16 is not appropriate. The examiner

suggests deleting this term.

Appropriate correction is required.

Specifications

2.   The disclosure is objected to because of the following informalities:

a) Term "**Figure 12**" in page 11 line 22 is not appropriate. The examiner

suggests changing this term to "**Figure 11**".

b) Term "**processor of Figure 13**" as appears in page 11 lines 24 and 26, and all

subsequence recited in page 12 is not appropriate. The examiner suggests changing

this term to "**processor of Figure 11** ".

c) Term "**ethernet**" page 16 line 26 is not appropriate. The examiner suggests

changing this term to "**Ethernet**".

d) Term "**kbp/s**" as appears in page 20 lines 18-19, and all subsequence recited

in the specification is not appropriate. The examiner suggests changing this term to

"**Kbps** ".

e) Term "**DSO**" page 41 line 15 is not appropriate. The examiner suggests

changing this term to "**DS0**".

f) Term **"cancelers"** page 45 line 12 and page 53 line 17 (two places) is

misspelling. The examiner suggests changing this term to **"cancellers"**.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   **Claims 1-36** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Byers et al. (US Patent No. 5,949,791) in view of Farris et al. (US Patent No. 5,592,477)

a) **Regarding to Claim 1**: Byers et al. disclosed a communication network, in

which both broadband and narrowband services could be provided to the home over a

single ATM technology based network (see Figs. 1A and 1B), comprising:

a first signaling processor configured to receive and process call signaling to

generate and transfer a first control message (see one of microprocessor 36 in Fig.2

and col.5 lines 10-30) indicating an identifier; and

a first interworking unit configured to receive voice-band communications and the

first control message (see Host terminal 32 in Figs.1A and 1B, and Fig.3, wherein the

32 acts as a first interworking unit), determine if initial voice-band processing is

required, perform the initial voice-band processing if required, convert the voice-band

communications into asynchronous communications with the identifier (see Fig.4 for

synchronous/asynchronous converters (SAC) 64) and with a processing indicator

indicating if the initial voice-band processing was performed, and transfer the

asynchronous communications (see col.5 line 61 – col.38).

Based on the disclosures of Byers et al., all subject matters of the claimed

limitations of the claim 1 are disclosed by Byers et al., except for an identifier indicated

by the first control message (wherein the identifier is used to identify whether user

communications are processed according to processing options such as compression,

encryption or other options). However, Byers et al. explicitly disclosed a video server

that provides video contents for transmission through the network via a broadband

switching system (BSS) to customer premise equipment (CPE); wherein, a broadcast

digital video includes compressed and encoded ATM formatted programming where an

ensemble of channels are packaged and selectively broadcast to CPEs in a serving

area via the BSS (see col. 4 lines 56-64). Ferris et al. teach such an identifier included

in a control message when a control processor sending a signaling message to a local

router for setting a connection (see routing label and backward indicator bit (BIB) in

Fig.7). Therefore, it would have been obvious to one of ordinary skilled in the art to

provide such an identifier as the BIB of Ferris et al. throughout one of header bits in the

cell size 1 in Fig. 5 of Byers et al., in order to identify appropriate user communications

for implementing before sending it to an appropriate CPE, the motivation would make

Ferris et al. more efficient.

b) **Regarding to Claim 2**: The communication system of claim 1 further

comprising:

a second interworking unit configured to receive the asynchronous

communications (see Byers et al.: Medium DM 78 in Figs. 1A and 1B, and Fig.7);

convert the asynchronous communications into the voice-band communications

(see Byers et al.: col.3 lines 60-64);

determine if the initial voice-band processing was performed based on the

processing indicator, perform additional voice-band processing if the initial voice-band

processing was performed (although Byers et al. did not explicitly disclose this subject

matter: "determine if the initial voice-band processing was performed based on the

processing indicator, perform additional voice-band processing if the initial voice-band

processing was performed", this is an obvious subject matter of processing in a

communication network because when the first (initial) voice-band processing was

completed by the first interworking unit, the next (additional) voice-band processing

could be performed by the second interworking unit because based on the structure of

connection, switching system 30 and host terminal 32 (considered as the first

interworking unit of this claimed limitation, wherein a CPE that connected to the first

interworking unit and controlled by the first processor can be connected through the

network to another CPE), which connect to CPEs 10 via the medium distribution

managers 78 (considered as the second interworking unit of this claimed limitation,

wherein the another CPE that connected to the second interworking unit and controlled

by the second processor can be connected through the network to the CPE). Thus,

when the first voice-band processing was performed by the first interworking unit, the

additional voice-band processing could be performed by the second interworking unit for time efficiency); and

transfer the voice-band communications (see Byers et al.: col.3 lines 63-64). Therefore, it would have been obvious to one of ordinary skilled in the art to provide such an identifier as the BIB of Ferris et al. throughout one of header bits in the cell size 1 in Fig. 5 of Byers et al., in order to identify appropriate user communications for implementing before sending it to an appropriate CPE, the motivation would make Ferris et al. more efficient.

c) **Regarding to Claims 3, 4** and **5**: The communication system of claim 2 wherein the initial voice-band processing comprises encryption and the additional voice-band processing comprises decryption (claim 3); the communication system of claim 2 wherein the initial voice-band processing comprises compression and the additional voice-band processing comprises decompression (claim 4); and the communication system of claim 1 wherein the initial voice-band processing comprises echo cancellation (claim 5).

Although Byers et al. did not explicitly disclose the claimed limitations of these claims, Byers et al. clearly disclosed a broadcast digital video includes compressed and encoded ATM formatted programming where an ensemble of channels are packaged and selectively broadcast to CPEs in a serving area via the BSS (see blocks 14 and 16 in Fig.1A, and col.4 lines 58-64). In addition, Byers et al. disclosed switched digital video signals, which are encapsulated in ATM cells before transmitting these signals to the CPEs (see col.4 lines 58-64).

Therefore, it would have been obvious to one of ordinary skilled in the art to

provide such a voice-band processing comprises encryption and decryption,

compression and decompression, or echo cancellation throughout the compressed and

encoded ATM formatted programming, encapsulated in ATM cells, and trunk units in

Fig. 2 of Byers et al., as taught by the applicant, in order to get a lower bit rate, or to

secure the information, as well as filtering a unwanted signal caused by echoes from a

main transmitted signal, the motivation being to make Byers et al. more reliable.

d) **Regarding to Claim 6**: The communication system of claim 1 wherein the

identifier indicates an asynchronous transfer mode connection (see ATM Adaptation

Layer (AAL) in col.3 lines 25-30), the asynchronous communications comprise

asynchronous transfer mode communications, and the first interworking unit is

configured to transfer the asynchronous transfer mode communications over the

asynchronous transfer mode connection (see col.3 lines 50-66).

Therefore, it would have been obvious to one of ordinary skilled in the art to

provide such an identifier as the BIB of Ferris et al. throughout one of header bits in the

cell size 1 in Fig. 5 of Byers et al., in order to identify appropriate user communications

for implementing before sending it to an appropriate CPE, the motivation would make

Ferris et al. more efficient.

e) **Regarding to Claim 7**: The communication system of claim 6 wherein the

processing indicator comprises an asynchronous transfer mode convergence sublayer

indicator. The interworking unit sets a convergence sublayer indicator in the

asynchronous transfer mode formatted user communications to indicate that the user

communications are processed according to the processing option. Both Byers et al. and Farris et al. did not explicitly disclose a convergence sublayer indicator. However, Byers et al. clearly disclosed a host terminal that converts synchronous narrowband signals (voice) to composite cell ATM format and combines these signals with ATM video and data signals then delivers the ensemble of ATM cells to CPEs (see col.3 lines 5-10). Therefore, it is inherent that Byers et al. disclosed this subject matter of the claim 7 because convergence provides the mechanism for mixing the different requirements of voice, video, and data by defining a number of classes of service, each with the appropriate parameters for the service, the motivation being to make Byers more efficient.

f) **Regarding to Claim 8**: The communication system of claim 1 wherein the call signaling comprises an initial address message. Both Byers et al. and Farris et al. did not explicitly disclose an initial address message (IAM). However, the IAM is one of the well-known designations for various SS7 messages commonly are used. Therefore, those skilled in the art are familiar with this message designation. Hence, it would have been obvious to combine well-known art with Byers in order to make Byers more reliable.

g) **Regarding to Claim 9**: Both Byers et al. and Farris et al. failed to teach the first control message indicating a type of the initial voice band processing and if the initial voice-band processing is required and perform the type of the initial voice-band processing based on the first control message. However, Byers et al. explicitly disclosed a switching system 30, wherein, it provides all narrowband telephony call

processing, and each switch module inside the switching system 30 is controlled by microprocessor and provides the call processing, time division switching, and signaling for the lines and trunks to which it connected. Furthermore, a host terminal 32 connected to the switching system 30 to serve as the integration point for all the narrowband telephony and broadband digital signals destined for the CPEs (see col.5 lines 10-30 and lines 60-63; also, see a signaling Table 153 in Fig.4 for the AAL signaling streams).

Therefore, it is inherent that Byers et al. disclosed these subject matters of the claim because a control message indicating a type of the initial voice band processing and if the initial voice-band processing is required and perform the type of the initial voice-band processing based on the first control message is those skilled in the art can provide via the switching system 30 and host terminal 32 as taught by Byers et al to maximize the efficient use of bandwidth under all traffic loads.

h) **Regarding to Claim 10**: The communication system of claim 1 wherein: the first signaling processor is configured to receive and process the call signaling to generate and transfer a signaling message indicating the identifier; and further comprising:

a second signaling processor configured to receive and process the signaling message to generate and transfer a second control message indicating the identifier (see Byers et al.: Medium DM 78 in Figs. 1A and 1B, and box of control processor 108 in Fig.7, and see the description of the DM 78) ; and

a second interworking unit configured to receive the asynchronous communications and the second control message (see Byers et al.: Medium DM 78 in Figs. 1A and 1B, and Fig.7), convert the asynchronous communications into the voice-band communications, determine if the initial voice-band processing was performed based on the processing indicator, perform additional voiceband processing if the initial voice-band processing was performed (although Byers et al. did not explicitly disclose this subject matter, this is an obvious subject matter of processing in a communication network because when the first (initial) voice-band processing was completed by the first interworking unit, the next (additional) voice-band processing could be performed by the second interworking unit because based on the structure of connection, switching system 30 and host terminal 32 (considered as the first interworking unit of this claimed limitation, wherein a CPE that connected to the first interworking unit and controlled by the first processor can be connected through the network to another CPE), which connect to CPEs 10 via the medium distribution managers 78 (considered as the second interworking unit of this claimed limitation, wherein the another CPE that connected to the second interworking unit and controlled by the second processor can be connected through the network to the CPE). Thus, when the first voice-band processing was performed by the first interworking unit, the additional voice-band processing could be performed by the second interworking unit for time efficiency); and

transfer the voice-band communications (see Byers et al.: col.3 lines 63-64).

Therefore, it would have been obvious to one of ordinary skilled in the art to provide

such an identifier as the BIB of Ferris et al. throughout one of header bits in the cell size

1 in Fig. 5 of Byers et al., in order to identify appropriate user communications for

implementing before sending it to an appropriate CPE, the motivation would make

Ferris et al. more efficient.

i) **Regarding to Claim 11**: The subject matters of this claim are similar to that in

the claims 1 and 2, except that a first control message and a signaling message both

indicating an identifier and a type of voice band processing; and a second signaling

processor configured to receive and process the signaling message to generate and

transfer a second control message indicating the identifier and the type of the voice

band processing. However, a first control message can be treated as a signaling

message because they are used to control connections and services and their functions

(hence indicating) are almost the same to each other; and Byers also disclosed a

second signaling processor (see box of control processor 108 in Fig.7) configured to

receive and process the signaling message to generate and transfer a second control

message indicating the identifier and the type of the voice band processing (see the

description of Fig.7 and see a signaling Table 153 in Fig.4 for the AAL signaling

streams). Therefore, it is inherent that Byers et al. disclosed these subject matters of

the claim because a control message indicating a type of the initial voice band

processing and if the initial voice-band processing is required and perform the type of

the initial voice-band processing based on the first control message is those skilled in

the art can provide via the switching system 30 and host terminal 32 as taught by Byers et al to maximize the efficient use of bandwidth under all traffic loads.

j) **Regarding to Claim 12**: The communication system of claim 11 wherein the signaling message comprises an initial address message. The claimed limitation in the claim 8 is the same as that in claim 12. Therefore, the rejection on claim 8 would be applied to claim 12, wherein the signaling message comprises an initial address message. Therefore, those skilled in the art are familiar with this message designation. Hence, it would have been obvious to combine well-known art with Byers in order to make Byers more reliable.

k) **Regarding to Claims 13-18**: The claimed limitations in the claims 3-8 are the same as that in the claims 13-18, except for the differences as described above in the claim 11. Therefore, the rejection on claims 3-8 would be applied to claims 13-18, respectively, in a communication system as taught.

l) **Regarding to Claims 19-36**: These claims are rejected for the same reasons as claims 1-18, respectively because the method steps claimed can be practice with the apparatus in the claims 1-18.

Conclusion

5.   The prior art made of record is considered pertinent to applicant's disclosure is relating to the field of telecommunications call transport and processing: Doshi et al. (US 5,729,536), Bigham et al. (US 5,740,075), Mueller (US 5,453,984), Hylton et al. (US 5,613,191), Wheeler (US 5,583,920), and Frey et al. (US 5,982,783).

Examiner Information

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony T Ton whose telephone number is 703-305-8956. The examiner can normally be reached on M-F: 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Olms can be reached on 703-305-4703. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

ATT

KENNETH VANDERPUYE
PRIMARY EXAMINER